

REMARKS

The present invention relates to methods and compositions for the differentiation of human preadipocytes isolated from adipose tissue into adipocytes. The invention further relates to methods and compositions for the identification of novel polypeptides secreted from human adipocytes.

Claims 16-31 are under consideration following entry of the present Preliminary Amendment. Claims 1-5 have been canceled previously and claims 6-15 have been canceled herein. New claims 16-31 have been added herein and support for new claims 16-31 is found throughout the specification as filed and as more fully set forth below.

Applicants respectfully submit that no new matter has been added by way of the present Amendment. That is, new claims 16-31 merely incorporate the subject matter of the claims in the parent application, now U.S. Patent No. 6,153,432 and the subject matter of the as-filed disclosure.

Support in the specification for new claims 16-31

Support for claim 16, is found throughout the as-filed specification. Specifically, support for a method of identifying a protein or a novel polypeptide secreted from a human adipocyte is found beginning on line 27 of page 4. Further, support for a method of identifying a protein or a novel polypeptide from a human adipocyte comprising isolating a human preadipocyte is found in Example 1, beginning on page 17. In addition, support for a differentiation medium as recited in claim 16 is found beginning on line 18 of page 4. Support for comparing the pattern of proteins or polypeptides secreted by the differentiated cell and identifying the protein is found in Example 7. Specifically, Example 7 discloses a method of culturing both a preadipocyte and a differentiated adipocyte, and a method of assaying the pattern of secreted proteins from each respected cell. That is, the specification teaches but does not limit the method of comparing the pattern of proteins secreted from the respected cell and identifying the secreted protein by the method of incubating the respected cell in a medium supplemented with $^{35}[\text{S}]$ methionine to label the secreted protein, and then separating the labeled protein on a gradient gel.

Applicants respectfully submit that new claim 16 is supported by the specification as filed and claim 16 does not add new matter.

Support for claim 17 for a medium comprising 3-10% fetal bovine serum is found on line 11 of page 7.

Support for claim 18 for a medium comprising 1-100 µM pantothenate and 1-100 µM biotin is found beginning on line 27 of page 6.

Support for claim 19 for a medium comprising a buffer having a pH of about 7.0 to 7.6 is found in line 1 of page 7.

Support for claim 20 for a medium of Dulbeccos Modified Eagle/Hams' F-10 Nutrient Broth (1:1 vol/vol) is found beginning on line 21 of page 6.

Support for claim 21 for thiazolidinedione as the Peroxisome Proliferator Activated Receptor gamma agonist is found in line 14 of page 8.

Support for claims 22 and 23 for BRL 49653 as the thiazolidinedione is found beginning on line 15 of page 8.

Support for claims 24 and 25 for troglitazone as the thiazolidinedione is found beginning on line 15 of page 8.

Support for claims 26 and 27 for dexamethasone, hydrocortisone or cortisol as the glucocorticoid is found beginning on line 4 of page 8.

Support for claims 28 and 29 for isobutylmethylxanthine or forskolin as the cyclic AMP inducer is found beginning on line 18 of page 7.

Support for claim 30 for insulin as a component of the medium is found beginning on line 25 of page 7.

Support for claim 31 for a genetically modified preadipocyte is found beginning on line 26 of page 15.

Applicants respectfully submit that claims 16-31 are supported by the specification as filed, and claims 16-31 does not constitute new matter.

Rejection of claims 6-15 pursuant to 35 U.S.C. § 112, first paragraph

Claims 6-15 stand rejected under 35 U.S.C. §112, first paragraph, because in the view of the Examiner, they contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventor, at the time of filing, had possession of the invention.

The Examiner asserts that the specification does not contain support for the phrase “greater than 95%.” While not necessarily agreeing with the Examiner’s reasoning, Applicants in a good faith effort to expedite the prosecution of the instant application have canceled claims 6-15. Applicants respectfully submit that the rejection of claims 6-15 pursuant to 35 U.S.C. § 112, first paragraph is rendered moot as the offending phrase does not appear in new claims 16-31.

Rejection of claims 6-15 pursuant to 35 U.S.C. § 112, second paragraph

Claims 6-15 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Specifically, the Examiner contends that the phrase “exhibit characteristics of an adipocyte” is unclear because the phrase does not state how many or what characteristics of an adipocyte are required.

While not necessarily agreeing with the Examiner’s reasoning, Applicants in a good faith effort to expedite the prosecution of the instant application have canceled claims 6-15 rendering this rejection moot.

Rejection of claims 6-8, 11 and 13-15 pursuant to 35 U.S.C. §102(b)

Claims 6-8, 11, and 13-15 stand rejected under 35 U.S.C. §102(b) because in the view of the Examiner, they are anticipated by Zilberfarb et al. While not necessarily agreeing with the Examiner’s reasoning, Applicants in a good faith effort to expedite the prosecution of the instant application have canceled claims 6-15. In view of the amendments to the claims, the Examiner’s rejection of claims 6-8, 11 and 13-15 is moot.

Applicants have added claims 16-31 by way of the present Amendment. Applicants submit that claims 16-31 are not anticipated by Zilberfarb et al. Preliminarily, it is well settled that “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” MPEP §2131 (quoting *Verdegaal Bros. v. Union Oil Co. of Calif.*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)). “The identical invention must be shown in as complete detail as is contained in the . . . claim.” *Id.* (quoting *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)).

Applicants respectfully contend that Zilberfarb et al. does not teach a differentiation medium wherein the differentiation medium contains glucose. Claim 16, as

pending following entry of the present Amendment, specifically recites that the differentiation medium comprises 1.0-4.5 g/liter glucose. Zilberfarb et al. teaches differentiation of PAZ6 cells by placing said cells in ITT (insulin, transferin, triiodothyronine) medium supplemented with 0.1 μ M dexamethasone, 850 nM insulin, 1 nM triiodothyronine, 1 μ M pioglitazone, and 0.25 mM 3-isobutyl-1 methyl-xanthine. No where in Zilberfarb et al. is glucose at a concentration of 1.0-4.5 g/liter disclosed as being supplemented to the differentiation medium. Therefore, claim 16 cannot be anticipated by Zilberfarb et al. because the reference does not disclose having 1.0-4.5 g/liter glucose in the differentiation medium.

Accordingly, Applicants respectfully submit that Zilberfarb et al. does not teach each and every element of the present invention as required under 35 U.S.C. §102(b) to anticipate the pending claims. That is, no where does Zilberfarb et al. disclose having glucose in the medium.

Summary

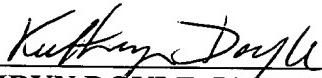
Applicants respectfully submit that each rejection of the Examiner to the claims of the present application has been overcome or is now inapplicable, and that each of the current claims under consideration is in condition for allowance.

Respectfully submitted,

HALVORSEN ET AL.

November 14, 2003
(Date)

By:


KATHRYN DØYLE, Ph.D, J.D.

Registration No. 36,317

MORGAN, LEWIS & BOCKIUS, LLP

1701 Market Street

Philadelphia, PA 19103-2921

Telephone: (215) 963-5000

Direct Dial: (215) 963-4723

Facsimile: (215) 963-5001

E-Mail: kdoyle@morganlewis.com

Attorney for Applicants

KD/QDN

Enclosures: Petition for a Four-Month Extension of Time and accompanying fee
RCE